ENVIRONMENTAL MANAGEMENT SYSTEM (EMS) IMPLEMENTATION/ CERTIFICATION WORKSHOP

Iowa Department of Natural Resources
Des Moines, Iowa
October 22-23, 2013

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DNR IOWA
DEPARTMENT OF NATURAL RESOURCES

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Objectives, Targets & Programs

- Environmental Objective
  - Overall environmental goal, consistent with the environmental policy, that an organization sets itself to achieve.

- Environmental Target
  - Detailed performance requirement, applicable to the organization or parts thereof, that arises from the environmental objectives and that needs to be set

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Setting Objectives and Targets

When setting objectives and targets, consider:

- Legal and other requirements

- Significant environmental aspects

- Technological options

- Financial, operational, and business requirements

- Views of interested parties

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Objectives and Targets

Examples:

- Reduce waste and depletion of resources

- Reduce or eliminate the release of pollutants

- Design products to minimize their environmental impact in production, use and disposal

Objectives and Targets

- Targets should be measurable, where practicable.

- Need to determine the "Performance Indicator" to be used to measure progress toward an objective/target.
  - What are we measuring/tracking?
  - How often?
  - How do we report?

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Performance Indicator

Examples:

- Quantity of raw material or energy used
- Percentage waste recycled
- Waste produced per quantity of finished product
- Number of environmental incidents
    (e.g. excursions above limits)
- Number of environmental accidents
    (e.g. unplanned releases)

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Objective, Target and Indicator

An integrated example:

Objective: reduce energy required in manufacturing operations

Target: achieve 10% reduction in energy consumption compared to previous year

Indicator: quantity of fuel and electricity per unit of production

Environmental Programs

How the objectives and targets will be met:

- Designation of **responsibility** for achieving objectives and targets at each relevant function and level of organization;
- The **means** and **time-frame**

Objectives, Targets & Programs

- Objectives & Targets should be approved by top management.
- Objectives, targets, and programs should be documented and communicated.
- Performance against objectives, targets, & programs should be reported regularly.
- Targets can be adjusted, as needed, with changing circumstances, but MUST document why.

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Program Form Example

EXAMPLE Objective & Target Program (OTP)

Objective	
Target	
OTP Champion	
OPT Team Members (optional)	
Date of last OTP update	

Action/Task	Responsible Party	Resources Required	Start Date	Estimated Completion Date	Status

EMS DOCUMENTATION

EMS Documentation

- Develop Documentation System
  - Document Control
  - Document Format
  - Utilize existing systems

- Develop documentation

- Implement documentation

EMS Documentation

- Communicates the organization's environmental policy, procedures, and requirements

- Provides direction in implementing an effective EMS

- Improves control measures

EMS Documentation

- Facilitates environmental management activities

- Provides continuity

- Serves as an important training tool for personnel

- Demonstrates conformance

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Environmental Policy

Reflects the commitment of top management to prevention of pollution, continual improvement, and compliance with applicable laws (4.2).

Environmental Policy

- The policy is intended to be broad so that its principles can be applied to documents located further down in the documentation hierarchy.

- Must contain commitments to compliance, pollution prevention, and continual improvement.

- Must be available to the public.

- Must be communicated to employees and contractors.

# The "Tiered" Documentation System
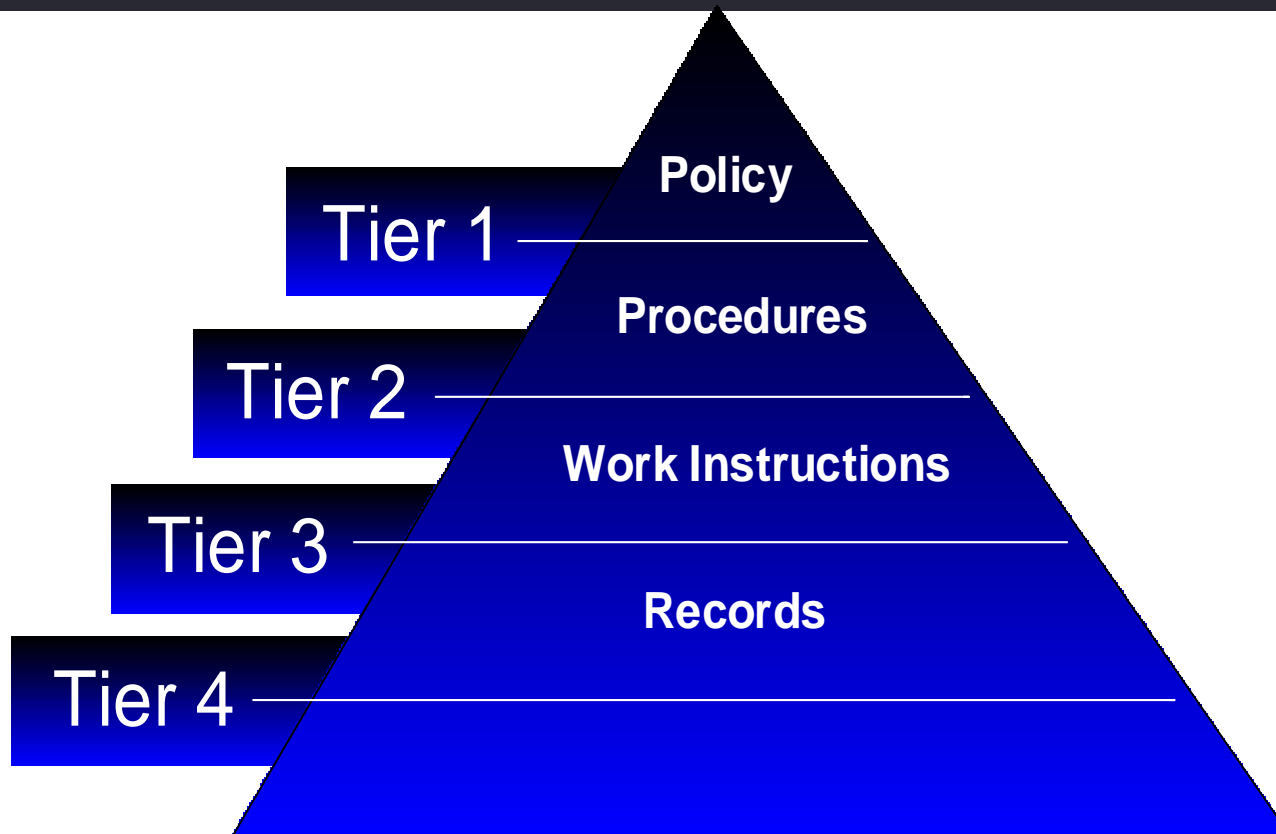
EMS Manual - Tier 1

- EMS manual not specifically required by ISO 14001; however, some registrars are requiring one.

- Describes the EMS in accordance with the stated environmental policy, objectives, and applicable standard

- Includes the environmental policy

EMS Manual - Tier 1

- Manual Purposes:
  - ➢ Serves as an overview of the EMS
  - ➢ Identify management functions
  - ➢ Communicate the environmental policy and objectives
  - ➢ Reference EMS procedures
  - ➢ Briefly address all applicable requirements of ISO 14001

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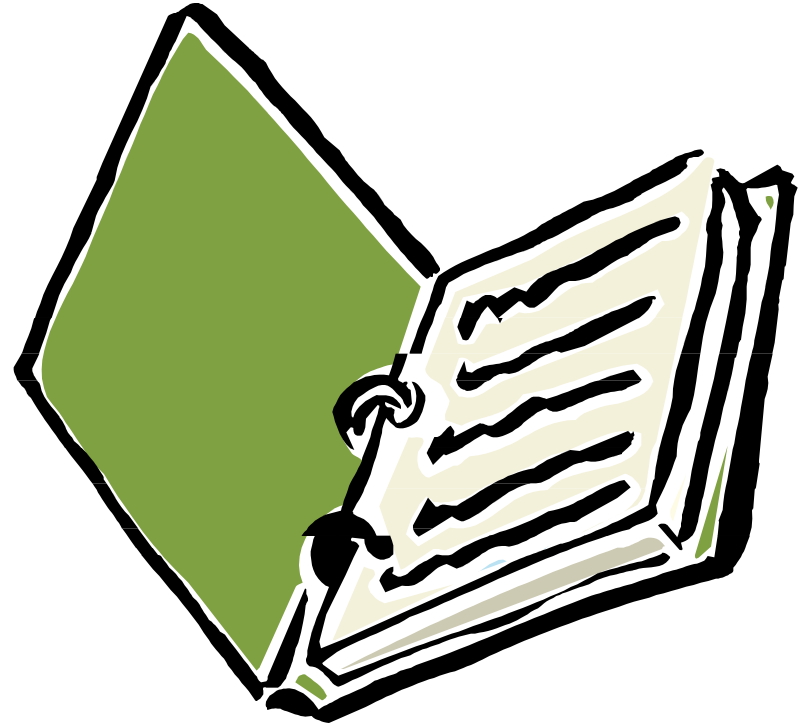
Procedures - Tier 2

Descriptive documents that present:

- **What** activities are

- **Who** does them

- **When**, **where**, and **why** they are performed
  (found throughout Section 4 of ISO 14001 standard)

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Procedures - Tier 2

Should include:

- **Purpose** of the procedure

- **Scope** of the procedure

- **Responsibilities, authorities,** and **interrelationships** of personnel who manage, perform, verify, or review work having the potential to affect the environment

- **Definitions**

Procedures - Tier 2

- Activities that are performed, where are they performed, by whom and why

- Documentation required to carry out an activity

- Controls to be applied

- Records that are generated

Keep Procedures Simple

- Procedures should be brief, simple, and direct

- Can be pictorial

- Avoid words…"always" / "never" / "all" / "none"

- Remember: ISO14001 requires only some procedures to be documented

Procedures

- Documented procedures are required by only a few ISO 14001 elements.
  - Many only require "procedures", not necessarily documented.
  - Some do not require procedures at all.
- Documented procedures are generally recommended to ensure consistency and continuity.

Work Instructions - Tier 3

Also called "operating criteria":

• Describes step-by-step, how activities are carried out

• How to perform a specific task

• Optional

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Records - Tier 4

- Provide objective evidence that EMS activities are being carried out

- Records must be retained to verify conformance to requirements and to demonstrate environmental performance

EMS Master Document Directory

- A directory or master list allows an organization to review the status of all of its relevant EMS documentation at a glance

- Organization tool for tracking EMS documentation

- Typically lists document numbers, document names, revision numbers/dates, etc.

- Optional, but may be helpful for document control.

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Striking the Balance Between Written Procedures and Skilled Employees

**Skills
Training
Education
Experience**

**Written
Procedures**

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Typical EMS Procedures

- Environmental Aspects

- Legal & Other Requirements

- Objectives, Targets, & Programs

- Structure & Responsibility

- Training, Awareness, & Competence

- Communication

Typical EMS Procedures

- Document Control

- Records Control

- Emergency Preparedness & Response

- Compliance Evaluation

- Nonconformity, Corrective & Preventive Action

- Internal Audits

- Management Review

Typical EMS Procedures

- Operational Control procedures/instructions
  - Various; dependent upon significant aspects and legal requirements
- Management of Change
- Contractor Control
- New Chemical Approval

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Typical EMS Procedures

- Monitoring & Measurement Procedures
  - Varies; often covered in other procedures, such as objectives & targets, operational controls, etc.
  - Calibration Procedures
    - Calibration and maintenance of monitoring equipment
  - Preventive Maintenance

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Control of Documents

- Documents must:
  - Be identifiable
  - Have revision date and/or number
  - Be available
  - Be approved for adequacy
- Obsolete documents must be removed or marked "obsolete"
- Documents of "external origin" must be controlled
  - Identified and distribution controlled
  - May include a wastewater operating manual, if that is used in lieu of an internal procedure.

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Control of Records

- Utilize existing record control procedures.
  - May need to revise to add environmental requirements.
- Procedure should cover the following for records:
  - Identification
  - Storage
  - Protection
  - Retrieval
  - Retention
  - Disposal

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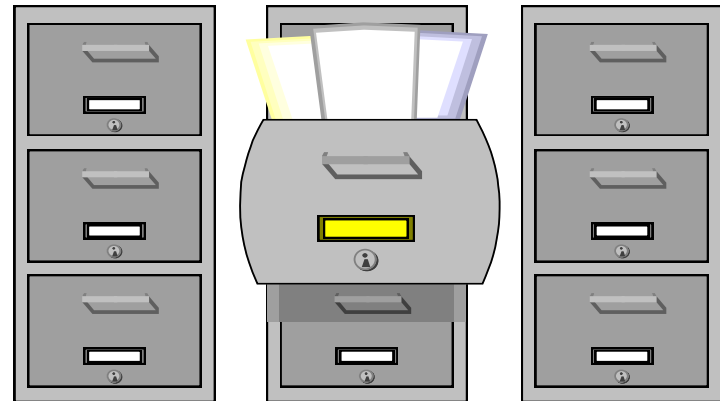
EMS TRAINING, AWARENESS, COMPETENCE

Training, Awareness, & Competence

- Identify training needs:
  - Who needs what training?
  - Frequency of training?
  - Training matrix:
    - Training required
    - Who is required to receive training (based on title, role, or department)
    - Frequency training is required
- How is training delivered?
- How is it documented?

Training, Awareness, & Competence

- When someone is assigned to a new job, how do we know what training he needs to perform that job?
- How soon after new job assignment must he receive training?
- How is this training delivered?
  - Classroom
  - OJT
  - Outside training
- How do we verify he is competent to perform the work?

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Training, Awareness, & Competence

- How do we document training?
- How do we track training?
  - i.e., how do we know when an annual refresher is due?
- Format of training?
  - Powerpoint/classroom
  - Safety meeting
  - New employee orientation
  - Web-based
  - Others?

Training, Awareness, & Competence

- EMS Training typically consists of:
  - EMS General Awareness Training
  - Emergency Response Training
  - Function-specific training
    - Significant aspects
    - Procedures
    - Legal/Compliance Requirements

General Awareness

- <u>Everyone</u> should receive
- Can be initial only, or may be annual
  - Add to new employee orientation
- Should include:
  - Why EMS/ISO 14001
  - Environmental Policy
  - Significant Environmental Aspects
  - Objectives & Targets
  - Procedures/Instructions and where to access
  - Communication methods
  - Roles & expectations
  - Basic emergency procedures
  - Who to call

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Training, Awareness, & Competence

- Function-specific training:
  - Significant aspects:
    - Employees who work with significant aspects should understand why the aspects are significant and what operational controls are required to minimize impact

Training, Awareness, & Competence

- Function-specific training:
  - Procedures:
    - For each EMS procedure developed, determine who needs to be aware of procedure.
    - Depending upon procedure, training may be formal or informal.

Training, Awareness, & Competence

- Function-specific training:
  - Legal/Compliance Requirements:
    - May overlap with significant aspect/procedure training
    - Much of this training is likely already being done.
    - Examples include:
      - Hazardous waste handling
      - SPCC/spill prevention
      - Storm water pollution prevention
      - Others?

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Documenting Training Needs

- Draft a training needs matrix
  - Training required
  - Frequency required
  - Training method/delivery
  - Who is required to have training?
    - Categories based on:
      - Function
      - Department
      - Title

Training Needs Matrix Example #1

Training Needs Table

Revision Date: 05/08/08

Training	Frequency	Applicable Personnel/ Job Function	Records Maintained By
EMS Awareness	Initial	All employees	HR
ISO 14001 Internal Auditor Training	Initial	EMS Internal Auditors	EMS Coordinator
Emergency Evacuation Training	Annual	All employees	Safety
Spill Training	Annual	Spill Response Team	Environmental
Storm Water Pollution Prevention Awareness	Annual	Finishing Plant, Dye House	Environmental

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Training Needs Matrix Example #2

Positions/Functional Titles

1. All Employees – Hourly/Salaried
2. Cross Functional Teams
3. Internal Auditors
4. Material Handling
5. Alternator Soldering Operations
6. Production Painters
7. Alternator Stator Varnish Operations

8. Chem Lab Personnel
9. P-32 Operations
10. Shop Support
11. Grounds, Equipment, and Construction
12. Plt. Eng., IE, Mfg Eng., and Operations
13. Coolant Handlers
14. Utilities/Wastewater Treatment

15. Medical
16. Security/Safety
17. Applicable Contractors
18. Resource Management
19. Chemical Management
20. Environmental Group
21. Training Dept

Training	Qualified Trainer /Coordinator	Records Kept	Freq	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17*	18	19	20
EMS Awareness (GA)	CFT Team/Manager/ Supervisor	HR E/E	Initial	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Significant Aspects* (GA)	Dept Manager/ Supervisor	HR E/E	Initial	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
EMS Procedures* (GA)	Dept Manager/ Supervisor	HR E/E	Initial	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Internal/Lead Auditor	Environmental MR	E/E	Initial			X																	
EMS Training ES-442-P-EMD05	Environment and Energy Group	E/E	Initial																				X
Communications ES-443-P-EMD06	Environment and Energy Group	E/E	Initial																X				X

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Competence

- Must ensure <u>employees and contractors</u> that have potential to cause significant environmental impact are ***competent*** based on education, training, or experience.
  - How do we ensure and document that employees are ***competent***?
  - How do we ensure and document that contractors are ***competent***?

Competence

- Competence may be demonstrated in a variety of ways:
    - Pass a test following training
    - Employee observation by supervisor
    - Job description specifies level of education and/or experience required to perform duties
    - Contract requirements specify level of experience and/or training required
    - Spot-checks of contractors

Competence

- How do we ensure our employees are competent?

- How do we ensure our contractors are competent?

- How do we demonstrate/document this?

EMS INTERNAL AUDITING & CORRECTIVE ACTION

Why Audit?

- ISO 14001 requires regular audits of the EMS

- Audits can be performed by in-house personnel or external party

EMS Audit

Systematic and documented verification process of objectively obtaining and evaluating to determine whether an organization's EMS conforms to EMS audit criteria.

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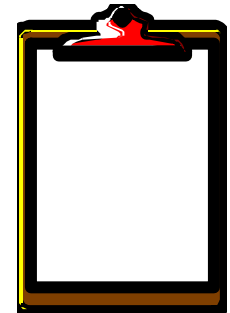
EMS Audit

- <u>Purpose of Audits:</u> To collect **Objective Evidence** to permit an **Informed Judgment** about the status of the **Environmental Management System**.

- <u>Goal of Audits:</u> To improve the system through corrective and preventive actions.

Objective Evidence

- Evidence that exists
- Not influenced by emotion
- May be stated or documented
- May be based on observation
- About the environmental management system
- CAN BE VERIFIED

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Informed Judgment

Once the objective evidence is identified and reviewed, an informed judgment is made to determine whether there is a nonconformity or not.
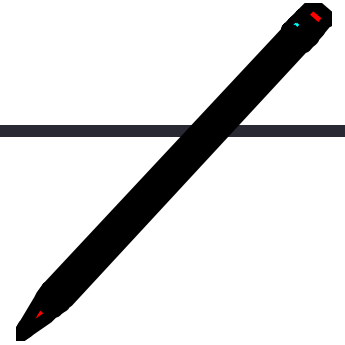
Is There a Nonconformity?

- Non-fulfillment of a requirement

- A nonconformity is the difference between what you "say you do" and "what you do"

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Nonconformities

- <u>Nonconformities occur because:</u>

  ➤ Procedure or approach does not meet the Standard

  ➤ Action is not as stated in approach/procedure

  ➤ Action is not effective

Nonconformities

Writing a Nonconformity Statement:

- Where am I?

- Who am I talking to?

  ➢ Avoid names, use titles/roles instead

- What are they doing?

- What are they supposed to be doing?

- Why is it a nonconformity?

  ➢ Cite reference to standard or procedure

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Types of Environmental Audits

- EMS System audits

- Compliance audits

EMS Audits vs. Compliance Audits

- Compliance auditing is carried out to determine whether a company is operating according to applicable legal, regulatory and other environmental requirements.

- Compliance audits address legal requirements (e.g. U.S. Code of Federal Regulations).

- EMS audits are conducted to evaluate the effectiveness of the EMS (e.g., meeting the requirements of ISO 14001).

EMS audits are referred to as <u>conformance</u> audits.

Environmental compliance audits are referred to as <u>compliance</u> audits.

EMS CONFORMANCE

ENVIRONMENTAL COMPLIANCE

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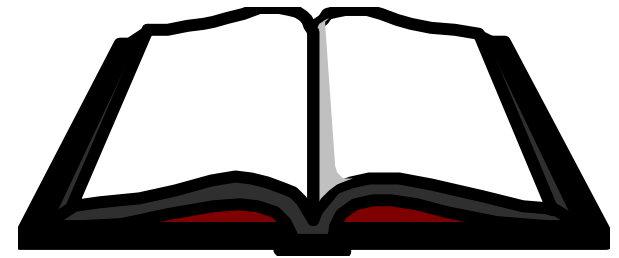Business Professionals

Phases of Auditing

- Planning

- Execution

- Reporting

- Close-out

Audit Planning

- Selection of Lead Auditor

- Audit Plan

- Working Documents

Selecting the Lead Auditor

- Responsibility to manage the audit and to verify the audit objective is met

- Defines the scope of audit with the client

- Collects background information

- Prepares the audit plan

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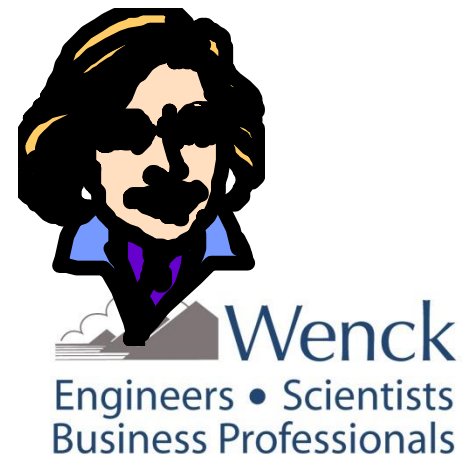
Audit Plan

The Audit Plan includes:

- Audit objective

- Audit scope

- Identification of audit team

- Duration and schedule

- Sources of background information

Audit Plan

Audit Objective:

- The reason for conducting the audit :

    - Meet customer requirements

    - Facilitate effective EMS implementation

    - Identify areas for improvement

    - Measure EMS effectiveness

    - Gain ISO 14001 registration

Audit Plan

Scope:

- Audit Scope - defines the criteria and boundary of the audit
  - Criteria - ISO 14001 standard, written EMS
    manual and/or procedures
  - Boundary - physical location, organization,
    facility, EMS elements, operations

Audit Plan

Selection of Audit Team - by Lead Auditor:

- Audit team size
  - Dependent upon duration of audit
  - Need appropriate number to meet audit objective
- Environmental experience
- Experience with function being audited
- Avoid potential conflicts of interest

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Audit Plan
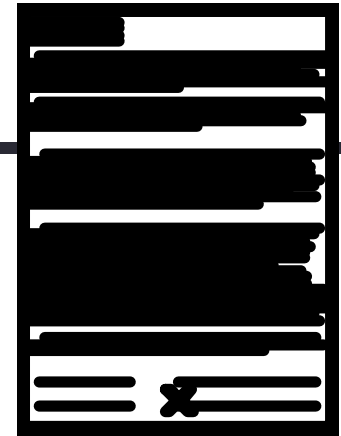
Duration and Schedule:

- Date the audit begins
- Number of days
- Schedule for opening and closing meetings
- Schedule of meetings to be held with management representatives

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Working Documents

Sources of Background Information:

- Copy of EMS Manual, Policy, Procedures,   Work Instructions, etc.
- Checklists
- Location and layout map
- Organizational chart

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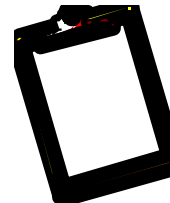
Checklists

- Keep the audit organized, on-track

- <u>Open-ended questions:</u>
  - Who, What, When, Where, Why and How

- Can be used to record objective evidence

Auditing / Follow-Up

- Opening meeting

- Examination
  - Collecting evidence
  - Observation
  - Reporting

- Closing meeting

Opening Meeting: Agenda

- Thank auditee
- Introduce audit team to auditee
- Take attendance (sign-in sheet)
- Review scope and objective
- Summarize methods
- Establish communication links and availability of guides
- Confirm resources / facilities
- Discuss use of safety equip. or restricted access areas
- Confirm timing for further meetings

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Audit Execution

- Audit interview for objective evidence:

  - Major and minor nonconformities

  - Closing meeting

  - Corrective and preventive actions

  - Audit report

Auditor Responsibilities

- Remain within the audit scope

- Remain objective

- Gather evidence to draw conclusions

- Interpret policies and procedures and determine conformance

- Satisfy sample

- Document audit results

- Conduct follow-up

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Collecting Evidence

- Observations

- Interviews

- Document and record reviews

Minor Nonconformity

- Isolated, witnessed incident or failure to conform with a procedure or a requirement of the standard

- Minor problem that warrants attention

- Cause and solution can be easily identified

Major Nonconformity

- Significant nonconformity with requirements of the standard

- Failure of a complete system or lack of an EMS requirement

- Significant quantity of minor nonconformities

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Closing Meeting

Follow-up/Close-out:

- Summary

- Recommendations

- Corrective action / follow-up

Closing Meeting: Agenda

- Thanks
- Reiteration of objectives and scope
- Presentation of findings
- Reporting system
- Limitations
- Summary
- Agreement
- Clarification
- List of attendees

Summarizing the Audit

- Total number of nonconformities

- Where they were found

- Areas where none were found

- Recommendation

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Audit Report

- Audit number and date(s)
- Audit scope and objective
- Auditors/auditees
- Concise summary
- CARs
- Attach opening and closing meeting sign-in sheet
- Recommendation

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INTERNAL AUDITING

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Purpose of Internal Audits

- Required by ISO 14001

- Evaluate effectiveness of our environmental management system (EMS)

  - Find deficiencies in our system – we want to find problems before our outside auditor does

  - Identify improvement opportunities and make our system better

- Key tool for "continual improvement"

Internal Audits

- May be a single audit or a series of small audits throughout the year.
- May be conducted by internal resources, such as an internal audit team.
  - Team should be qualified/competent based upon education, training, and experience.
    - Internal auditor training
    - OJT by shadowing experienced auditor
- May be performed by a qualified auditor acting as internal auditor (i.e., consultant).

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Objective Auditing

- Need objective/unbiased auditors
- Requirement of ISO 14001
- Auditor should not be responsible for area/ function being audited to get unbiased assessment
  - "Fresh set of eyes"

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Effective Internal Audits

- Outside auditor judges the effectiveness of our internal audits
  - Audit schedule covers everything?
  - Audits are conducted in a timely manner?
  - Unbiased/objective auditors?
  - Audits yield value-added findings, observations, recommendations?
  - Appropriate follow-up?

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How to Audit

- Prepare
- Audit
  - Observe
  - Interview
  - Review records
- Document
- Follow-up

Audit Preparation

- Print/review documents to be audited

- Prepare questions to ask and records to review

- Make arrangements with auditee, including when/where/what will be audited

Audit Preparation

- Other things to consider:
  - When was this last audited?
  - Where there any previous findings/NCRs?
  - Have the previous issues been resolved?
  - Have there been any recent revisions to the documentation since the last audit?

Conducting the Audit

- Observe actions
  - If possible, conduct audit when you can observe the procedure "in action"
- Interview auditee(s)
  - Gather info
  - Measures awareness
- Review records/collect objective evidence
- Take good notes

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Interviewing Techniques

- Ask open-ended questions
- Keep questions simple
- Ask one question at a time
- Listen and let them talk
- Answers often lead to more questions
  - Don't limit yourself to your "prepped" questions only

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Example Audit Questions

- What are your job responsibilities?

- What is the environmental policy?

- What does this policy mean to you?

- How does the policy relate to your job?

- How did you learn your job?

- What procedures are related to your job?

- How do you know your procedures are current?

- What records do you keep?

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What to avoid

- Asking questions too rapidly

- Asking more than one question at a time

- Asking questions that are too lengthy

- Asking questions that imply the answers

- Interrupting the auditee

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Collect Evidence

- Look for records to obtain "objective evidence"
  - Take good sample - don't just look at last 2 or 3 records
  - Gather historical data – go back several months or years, as appropriate
    - The longer it's been since the last audit, the further back you should go
  - Ensure records are completed and kept consistently, as required
- An auditor should not let the auditee choose what is to be sampled

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Be Thorough!

- Follow where the audit trail leads
  - Ask questions
  - Ask for records
  - "Show me"
  - "Prove it"
- Remember, our purpose is to improve our system! We want to dig deeper than the outside auditors.

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Recording Audit Evidence

- Keep good notes and be sure to include:
  - Personnel interviewed
  - Statements made
  - Document numbers
  - Records reviewed
  - Departments
  - Identifiers
  - Date

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Documenting the Audit

- Document what you observed/asked/reviewed/looked at
  - ***Objective evidence***
  - Include good and bad findings/observations
- Need evidence of what was reviewed

  Don't rely on memory!

  Provides historical information for the next audit of this procedure/element/section

  Provides evidence of audit effectiveness for external audit

Workshop/Breakout Session

- Audit for Objective Evidence
  - Is there a nonconformity?
  - Do we have enough information?
  - What additional questions should we ask to obtain the necessary objective evidence?

Identifying Root Cause and Applying Corrective Action

The means toward continual improvement.

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Are Nonconformities Bad?
Or can they be good?

- The finding of a nonconformance should not be portrayed negatively.

- It presents the opportunity to make improvements to the EMS.

- It demonstrates the effectiveness of our internal audit process.

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Writing Nonconformities

- Date
- Audit subject matter
- Where am I?
- Who am I talking to?
- What is being done vs. what is supposed to be done per the requirements?
- Requirement (i.e., procedure, document)
- Why is it a Nonconformity?
  - Reference the requirement

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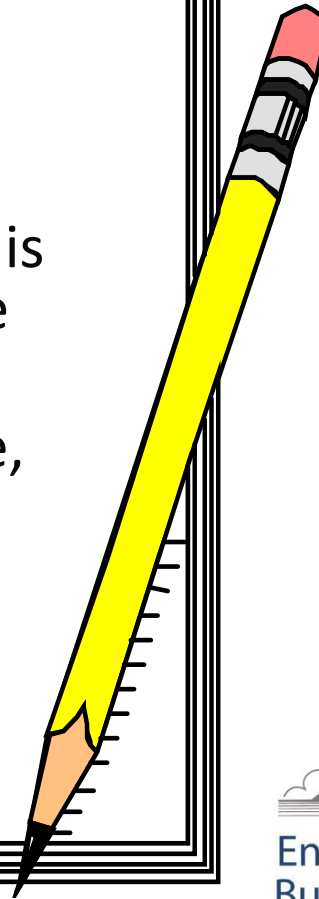
Corrective Action Process

- Nonconformity will be assigned to auditee
- Auditee will respond to NCR by identifying **root cause** and **corrective action (CA)**
- Auditor will verify effectiveness of root cause and CA

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Steps of Corrective Action

- Finding/Nonconformity
  - **What** happened? Where? Who?
- Root Cause
  - **Why** did the finding/nonconformity occur?
- Corrective Action (CA)
  - **How** do we prevent this from happening again?
- Preventive Action (if applicable)
  - Can we apply this to other areas to prevent future problems?
- Verification
  - Was the CA effective and timely?

Root Cause Analysis

- Why did the nonconformity occur?

    - Is training required?

    - Procedure incorrect or needs revision?

    - Is there a better way to perform the activity?

    - New procedure / instruction needed?

Root Cause

- Should NOT be a restatement of the finding.

- Why did the nonconformity occur?

- What in the system failed which caused this problem?

- "5 Why" method:

  - *Example: Product did not meet specification.*

    - *Why 1: Machine was not set up properly.*

    - *Why 2: Operator did not follow work instruction.*

    - *Why 3: Operator was not aware of work instruction.*

    - *Why 4: Operator was not trained on work instruction.*

    - *Why 5: Training process not effectively implemented.*

Corrective Action

- What can we do to eliminate the root cause?

- What can we do to make sure the nonconformity doesn't re-occur?

- How do we keep the problem from happening again?

Corrective Action

- Corrective Action must address the identified root cause.
- How do we prevent the nonconformity from happening again?
- What are the actions to address the cause?
- Who is responsible?
- Targets dates for completion.

Verification of Corrective Action

- Evaluate the root cause to ensure that the root cause was properly identified and addressed (not just a quick fix).

- Ensure that the CA was completed as stated/scheduled and is appropriate to the finding/root cause.

- Was the CA effective? Any evidence of recurrence?

- Review evidence of implementation.

- If CA is not effective or incomplete, issue new Corrective Action Request.

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Preventive Action

- Could a corrective action be applied to other areas of our business?

- Did Management Review point out an action to prevent a nonconformity before it occurs?

Workshop/Breakout Session

- Corrective Actions - are they appropriate?

MANAGEMENT REVIEW & ONGOING COMMITMENT

Management Review

- Top management reviews the EMS periodically to ensure continuing suitability, adequacy, and effectiveness.

- Procedure not required but recommended.

- Who is on the management review team?

- How many need to be present for a management review?

- How often?

Management Review

- Records of management review must be maintained.
  - Meeting minutes
  - Meeting agenda
  - Management review checklist
  - Ensure inputs and outputs are adequately documented.

Management Review

- Required inputs:
  - Results of internal audits, compliance evaluations, and evaluations of other requirements.
  - Communications from external interested parties, including complaints.
  - Environmental performance of the organization.
  - Progress toward objectives & targets.
  - Status of corrective and preventive actions.
  - Follow-up actions from previous management reviews.
  - Changing circumstances, including legal & other requirements.
  - Recommendations for improvement.

Management Review

- Other inputs to include?
  - Need for resources
  - Challenges
  - Relevant internal communications
  - Training status
  - Recent incidents

- Other items?

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Management Review

- Required outputs:
  - Decisions and actions related to possible changes to environmental policy, objectives & targets, and other elements of the EMS, consistent with the commitment to continual improvement.

- Looking for feedback from management on the EMS, suggestions for improvement, etc.
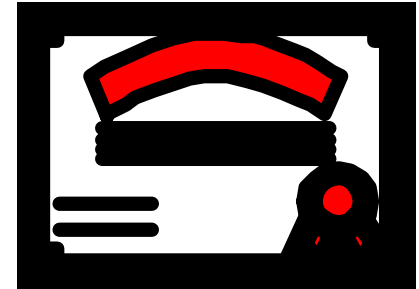
Management Review

- Frequency:
  - Management review should be done at least annually.
  - May be once per year meeting, or may consist of a series of more frequent meetings (i.e., quarterly).

ISO 14001 REGISTRATION PROCESS

ISO 14001 Certification

Registration Process:

- Independent, Accredited Registrar

- Pre-Assessment Audit (optional)

- On-Site Audit Registration Audits

  ➢ Stage I & Stage 2

- Surveillance Audits

  ➢ Can be annual or semi-annual (every 6 months)

- Recertification every 3 years

Third-Party Registration Audit

- A registration audit is conducted by an external party -- a registrar or certifying body -- to determine if an organization's implemented EMS:
  - ➢ Conforms to ISO 14001
  - ➢ Functions as described in related EMS documentation.
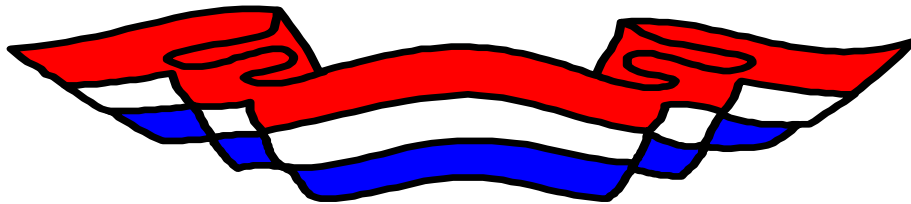
Third-Party Registration Audit

When the registrar determines that the EMS meets all of the applicable requirements, the company is eligible for a certificate of registration.

Only the registrar can issue a certificate of registration, not the audit team.

ISO 14001 Registration

- Initial registration audit consists of two (2) stages:

STAGE 1:

A detailed analysis / document review to provide focus for planning the on-site (Stage 2) audit. It involves gaining an understanding of the EMS in the context of the organization's:

- Environmental aspects and impacts
- Environmental policy and objectives
- State of preparedness for the Stage 2 audit

STAGE 2:

An on-site audit conducted to confirm:

- That the organization adheres to its own policies, objectives and procedures.

- That the EMS conforms with all requirements of the standard and is achieving the organization's policy and objectives.

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Stage 1

- This portion of the audit should verify that:
  - ➢ An adequate process exists for identifying significant environmental aspects.
  - ➢ Environmental permits are in place for relevant activities.
  - ➢ The EMS is designed to achieve the environmental policy.
  - ➢ The results of previous internal audits demonstrate conformance to ISO 14001.
  - ➢ The site is ready for Stage 2.

Stage 2

- Stage 2 focuses on an organization's:
  - ➢ Identification of environmental aspects and significance determination.
  - ➢ Objectives & targets derived from evaluation process.
  - ➢ Performance monitoring, measuring, reporting, and reviewing.
  - ➢ Internal auditing and management review.
  - ➢ Management responsibility for the environmental policy.

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Stage 2 (continued)

- Links between:
  - Environmental Policy
  - Environmental aspects/impacts
  - Objectives & targets
  - Responsibilities
  - Programs
  - Procedures
  - Performance data
  - Internal audit and review

Linkage is very important! The EMS should read like a system, not just a bunch of elements thrown together.

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EMS Costs/Resources

- Costs vary based on a number of factors:
  - Size/complexity of organization
  - How much exists vs. how much needs to be developed (can be estimated during Initial Review or "Gap Analysis")
  - How much to be done internally vs. how much hired out
    - Consultant support can provide guidance and facilitation to ensure efficient implementation
    - Internal Resources should remain involved throughout
    - Interns can assist with some of the implementation "grunt work"
  - Schedule/timeline
  - Most of the effort is in the initial implementation
  - Example scenarios

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Registration Costs

- Can get various quotes from registrars
- Depends on number of auditor-days + expenses
- Calculated based on:
  - Complexity/size of site
  - Compliance burdens/requirements (permits, waste generator status, etc)
  - Number of employees
  - Number of shifts
  - Span of location
- Audits:
  - Pre-Assessment (optional)
  - Stage 1
  - Stage 2
  - Surveillance
  - Re-Certification

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PARTING TIPS & ADVICE

General Tips

- Start with an implementation plan/schedule
  - Even if you don't stick to it 100%, helps to keep you on track
- Utilize existing systems, processes, and documentation
  - No need to recreate what has already been done
- More than one "right way"
  - Do what works for you

General Tips

- Communicate and share information within the site and across sites:
  - Successes
  - Challenges
  - Lessons learned
  - Audit results
  - Corrective actions
  - Preventive actions
  - Improvements

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General Tips

- Communication of the EMS is very important throughout process:
  - Helps to raise awareness
  - Helps to gain employee understanding and buy-in
- Utilize employee resources and knowledge
  - Do not implement EMS in a "vacuum"

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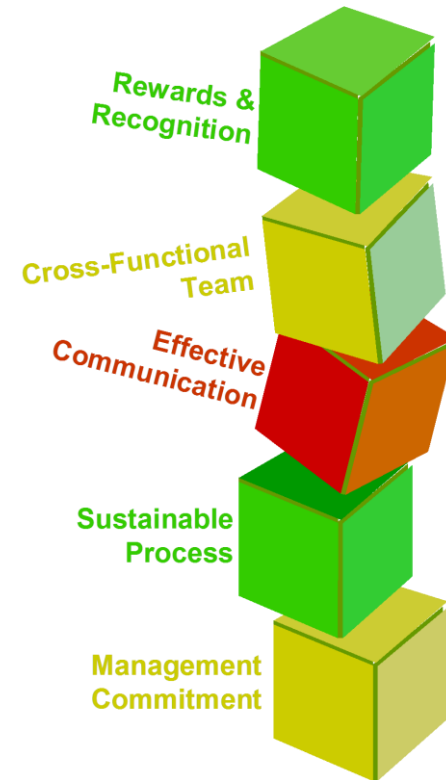Business Professionals

General Tips

- Ideally conduct first internal audit after:
  - All documents have been implemented:
    - Are being used
    - Records being generated
  - Training has been completed
  - At least one management review
- REMEMBER: must complete one full EMS cycle prior to Stage 2 Registration Audit

EMS Implementation Strategies

- Clear implementation plan
- Strong management support
- Teamwork
- Communication/awareness
- Common documents
- Sharing lessons learned
- Integrate with existing systems
- Understand expectations
- Sustaining the EMS

Rewards & Recognition

Cross-Functional Team

Effective Communication

Sustainable Process

Management Commitment

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EMS Sustainability

- Ensure the EMS is sustainable and beneficial
    - Facility ownership
    - Employee involvement
    - Fits within the facility culture
    - Integrated with other business systems
    - Procedures are effective
    - Objectives and targets are meaningful
    - Clear metrics
    - Effective prioritization

- Effective EMS → Cost Savings
Business Improvement
Risk Reduction

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Questions???

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